

Ecoregion Reference Stations

The Ecoregion Reference Station Program (ERS) is used to support surface water quality and biological monitoring activities of Water Monitoring and Standards by providing a network of biologically “non-impaired” (minimally-impacted) reference stations for each of the eight (8) ecological regions identified within the State. Ecoregion boundaries generally conform to those of the eight physiographic provinces depicted in the New Jersey State EcoMap. The "Fall-Line" (red to brown interface on the map) marks the transition zone from the "high-gradient" streams of the northern upland regions, to the "low-gradient" streams of the southern Coastal Plain regions.

Originally introduced by USEPA in the 1980's, the Ecological (Eco) Region concept accepts the premise that waterbodies reflect the character of the land they drain, and that where sites are physically comparable, chemical and biological conditions should also be comparable. As such, reference sites within a given ecoregion can serve as benchmarks, or yardsticks, for all other stations within the same ecoregion. The reference stations are, therefore, powerful tools in assessing the results from both biological and chemical monitoring stations in the other WM&S networks. Ecoregion sites are now among the over 800 AMNET stations, and they serve as a reference database for the AMNET assessments.

This network supports a number of water quality programs including the development of NJ's Integrated Water Quality Monitoring and Assessment Report. Reference site selection is based upon a number of factors, including but not limited to: good water quality, presence of pollution intolerant benthic macroinvertebrate species, stable stream banks and channels, the absence of excessive suspended solids/siltation, and the absence of upstream point or non-point sources of pollution. Since the inception of the program in 1989, seventy-three (73) biological reference stations have been incorporated into the network, after extensive biological monitoring at each station. Copies of the network results are available by calling the Bureau of Freshwater & Biological Monitoring at (609) 292-0427 or through the Bureau's webpage (www.state.nj.us/dep/wmm/bfbm/publications.html).

New Jersey's Ecoregion Reference Stations 2003

WATERSHED MANAGEMENT AREAS

1. Upper Delaware
2. Wallkill
3. Pompton, Wanaque, Ramapo
4. Lower Passaic and Saddle
5. Hackensack and Pascack
6. Upper Passaic, Whippany and Rockaway
7. Arthur Kill
8. North and South Branch Raritan
9. Lower Raritan, South River, Lawrence
10. Millstone
11. Central Delaware
12. Monmouth
13. Barnegat Bay
14. Mullica
15. Great Egg Harbor
16. Cape May
17. Maurice, Salem and Cohansey
18. Lower Delaware
19. Rancocas
20. Assiscunk, Crosswicks and Doctors

LEGEND

-  Ecoregion Reference Stations
-  Gettysburg Piedmont
-  Glaciated Reading Prong
-  Inner Coastal Plain
-  Kittatinny Limestone Valley
-  Kittatinny Shawangunk Mountain & Ridges
-  Newark Piedmont
-  Outer Coastal Plain
-  Reading Prong
-  Watershed Management Areas
-  Major Rivers/Streams

20 0 20 Miles



New Jersey Department of Environmental Protection
Water Monitoring and Standards
Bureau of Freshwater and Biological Monitoring